

Serial No.: 09/135,183
Filing Date: August 17, 1998
Group Art Unit: 1643

In the Claims:

1. (Amended) A composition comprising:

a) an electrode comprising:

i) a self-assembled monolayer comprising conductive oligomers; and

ii) a capture probe;

b) a target sequence comprising a first portion that is capable of hybridizing to said capture probe, and a second portion that does not hybridize to said capture probe and comprises at least one covalently attached electron transfer moiety (ETM).

2. (Amended) A composition comprising:

a) an electrode comprising:

i) a self-assembled monolayer comprising conductive oligomers; and

ii) a capture probe;

b) a label probe comprising a first portion that is capable of hybridizing to a component of an assay complex, and a second portion comprising a recruitment linker that does not hybridize to a component of [an] assay complex and comprises at least one covalently attached electron transfer moiety (ETM).

11. (Amended) A method of detecting a target nucleic acid sequence in a test sample comprising:

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line
- a) [attaching] forming a hybridization complex including said target sequence and a capture probe; wherein said capture probe is on [to] an electrode comprising a self-assembled monolayer [of] comprising conductive oligomers;
 - b) directly or indirectly attaching at least one label probe to said target sequence to form an assay complex, wherein said label probe comprises a first portion capable of hybridizing to a component of said assay complex, and a second portion comprising a recruitment linker that does not hybridize to a component of said assay complex and comprises at least one covalently attached electron transfer moiety (ETM); and
 - c) detecting the presence of said ETM using said electrode.
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[Please add the following new claims:]

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--20. A composition according to claim 2 wherein said second portion is not nucleic acid.

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21. A composition according to claim 20 wherein said second portion is a metallocene polymer.

22. A composition according to claim 21 wherein said metallocene polymer is a ferrocene polymer.--
